8/028

CRUISE REPORT

WHITEFOOT WF 81-2

July 22 - 31, 1981

David C. Twichell
U.S. Geological Survey
Woods Hole, MA 02543

Vessel: WHITEFOOT, cruise WF 81-2

Area of Operation: Lydonia and Oceanographer Canyons

Dates: Depart Woods Hole 1545 (EDT) 22 July 1981

Arrive Woods Hole 1130 (EDT) 25 July 1981

Depart Woods Hole 1630 (EDT) 25 July 1981

Arrive Woods Hole 0630 (EDT) 31 July 1981

Personnel: Roy Campbell, Captain

David Twichell, Chief Scientist, USGS

Greg Miller, USGS

Glenn Greilich, USGS

Equipment: Northstar Loran-C

Klein sidescan sonar (50 kHz)

EG&G Uniboom

Edo Western 2.5 kHz profiler

Objectives:

Sidescan sonar, Uniboom, and some 2.5 kHz data were collected during the the WHITEFOOT 81-2 cruise in the heads of Lydonia and Oceanographer Canyons and on the surrounding shelf. The objectives of the cruise were (1) to accurately map the morphology of the canyon heads and adjacent shelf (2) identify the types and map the extent of bedforms in and around the canyon heads as an indicator of sedment mobility, (3) outline the shallow structure of the canyon heads to define their recent history, and (4) map areas of sediment erosion and accumulation to define sediment transport patterns through the canyons.

Narrative:

22 July 1545 (EDT)	Depart Woods Hole
23 July 1510	Deploy sidescan, Uniboom, and 2.5 kHz systems. Start survey of Lydonia Canyon.
24 July 0240	Sidescan fish hauled aboard because damaged when tangled with piece of longline fishing gear.
0335	Continue survey with just Uniboom and 2.5 kHz systems.
0620	Shut down 2.5 kHz system because interfering with Uniboom. Continue survey with Uniboom alone.
1602	Haul gear and head to Woods Hole for sidescan repairs.

25 July 1130	Arrive Woods Hole for sidescan repairs.
1630	Depart Woods Hole.
1730	Arrive Vineyard Haven for fueling and food.
2330	Depart Vineyard Haven.
26 July 1904	Deploy sidescan and Uniboom, continue survey in Lydonia Canyon.
	Power failure to seismic hut; haul sidescan fish aboard for the night.
2050	Repair power failure and continue with Uniboom survey.
27 July 0518	Deploy sidescan fish - continue survey using sidescan and Uniboom.
	Sidescan aboard for repairs - continue Uniboom survey.
28 July 0535	Deploy sidescan fish - continue survey using sidescan and Uniboom.
	Break survey. Haul gear aboard to go assist R.V. GYRE with their broken sidescan winch.
29 July 0605	Return from assisting R.V. Gyre, continue with Uniboom and sidescan survey of Lydonia Canyon.
	End Lydonia Canyon survey, head for Oceanographer Canyon.
	Start Oceanographer Canyon survey.
	Haul sidescan fish aboard for the night (to avoid hanging it up on a lobster pot), continue surveying with Uniboom.
30 July 0602	Deploy sidescan, continue survey with sidescan and Uniboom.
1230	End Oceanographer Canyon survey, haul seismic gear and head for Woods Hole.
31 July 0630	Arrive Woods Hole.

Tabulated Information:

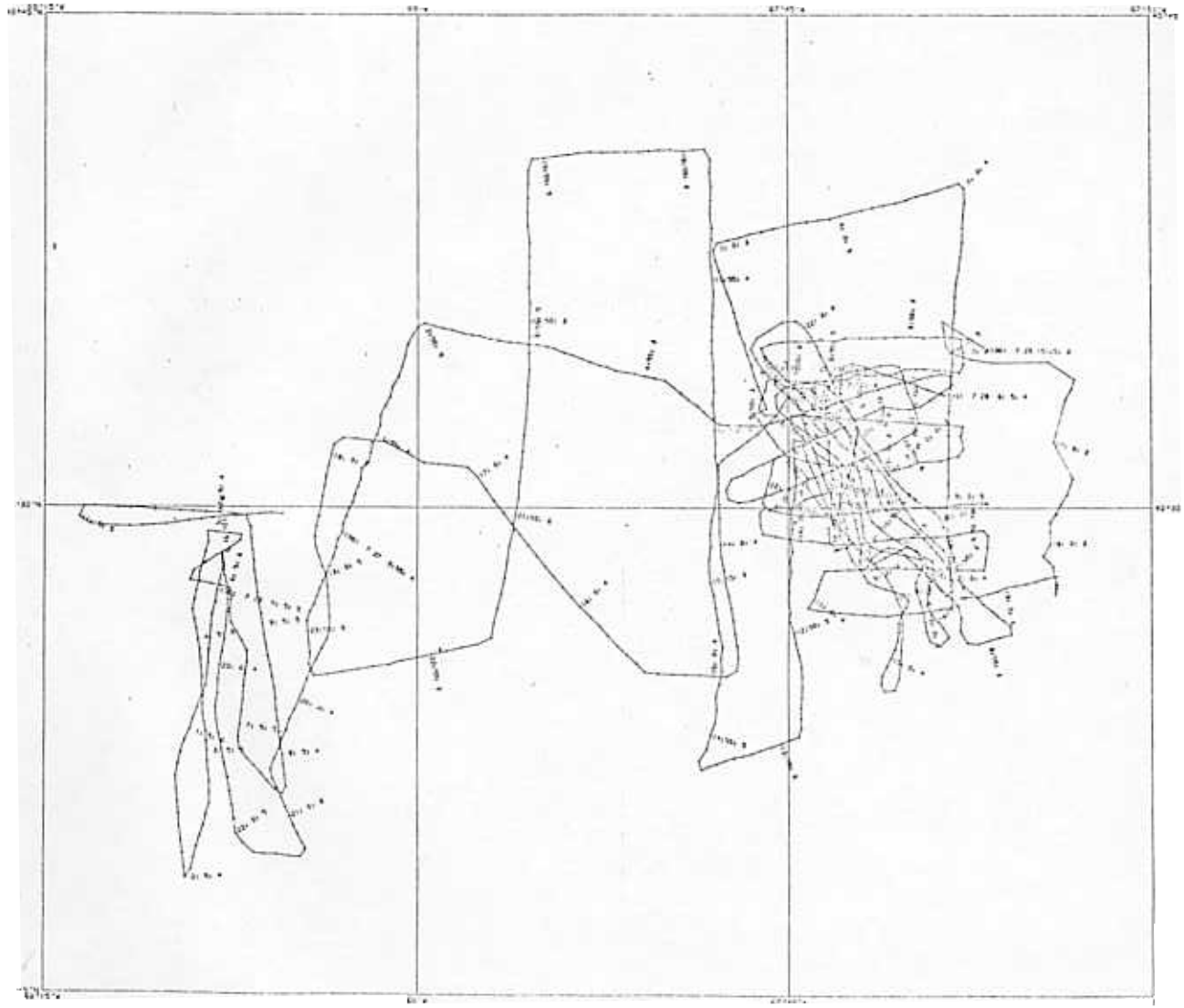
a. Days at sea: 9

b. Seismic survey:

Equipment	Time (EDT)	Latitude	Longitude
Deploy sidescan, Uniboom, 2.5 kHz	1510 23 July	40°36.72'N.	67°36.30'W.
Recover sidescan	0240 24 July	40°30.68'N.	67°44.26'W.
Recover Uniboom and 2.5 kHz	1602 24 July	40°30.13'N.	67°37.43'W.
Deploy sidescan and Uniboom	1904 26 July	40°34.27'N.	67°45.23'W.
Recover sidescan	2005 26 July	40°32.30'N.	67°43.58'W.
Deploy sidescan	0518 27 July	40°33.86'N.	67°45.00'W.
Recover sidescan	1048 27 July	40°30.05'N.	67°43.45'W.
Deploy sidescan	0535 28 July	40°32.70'N.	67°48.10'W.
Recover sidescan and Uniboom (assist GYRE)	2055 28 July	40°30.30'N.	67°42.88'W.
Deploy sidescan and Uniboom	0605 29 July	40°33.44'N.	67°38.58'W.
Recover sidescan	2112 29 July	40°19.93'N.	68°04.81'W.
Deploy sidescan	0602 30 July	40°27.47'N.	68°07.52'W.
Recover sidescan and Uniboom	1230 30 July	40°29.79'N.	68°05.40'W.

c. Amount of seismic data collected:

System	Time spent	km of data collected
2.5 kHz	15 hours, 10 minutes	89
Uniboom	127 hours, 50 minutes	888
Sidescan	55 hours, 0 minutes	401



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